

Abstract

A method for actuating or installing downhole equipment in a wellbore employs non-acoustic signals (e.g., radio frequency signals) to locate, inventory, install, or actuate one downhole structure in relation to another downhole structure. The method comprises the steps of: (a) providing a first downhole structure that comprises a non-acoustic (e.g., radio frequency) identification transmitter unit that stores an identification code and transmits a signal corresponding to the identification code; (b) providing a second downhole structure that comprises a non-acoustic receiver unit that can receive the signal transmitted by the non-acoustic identification transmitter unit, decode the signal to determine the identification code corresponding thereto, and compare the identification code to a preset target identification code; wherein one of the first downhole structure and the second downhole structure is secured at a given location in a subterranean wellbore, and the other is moveable in the wellbore; (c) placing the second downhole structure in close enough proximity to the first downhole structure so that the non-acoustic receiver unit can receive the signal transmitted by the non-acoustic identification transmitter unit; (d) comparing the identification code determined by the non-acoustic receiver unit to the target identification code; and (e) if the determined identification code matches the target identification code, actuating or installing one of the first downhole structure or second downhole structure in physical proximity to the other.